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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PATEL, PARESH H

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

10/040,581

Applicant(s)

SU ET AL.

Examiner

Paresh Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Levy (US 6535659).

Regarding claim 1, Levy in fig. 3 discloses electrical testing of planar light wave circuit [waveguides] which is improvement from testing of planar light wave circuit shown in prior art Fig. 1. In Fig. 1, Levy discloses testing planar light wave circuit using optical and electrical signal. Therefore, Levy in Fig.1 discloses method of electrically and optically testing a planar light wave circuit comprising: placing the planar light wave circuit [array of 12 for 24] on a test fixture [22], the test fixture including a printed circuit board [26, 28 and 30 with 22]; electrically coupling the printed circuit board to the planar light wave circuit [electrical connection between 24 and 28 via 30]; electrically coupling the printed circuit board to a tester [26, lines 17-48 of column 1]; optically coupling the planar light wave circuit to the tester [26, lines 17-48 of column 1]; and performing electrical and optical testing on the planar light wave circuit [using 26, lines 17-48 of column 1].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy as applied to claims 1 above, and further in view of Forsyth et al. (US 4910548).

Regarding claim 2, Levy discloses all the elements except for holding the planar light wave circuit in place using a vacuum. Levy is silent about it. Forsyth et al. (hereafter Forsyth) discloses the planar light wave circuit [30] in place using a vacuum [lines 36-38 of column 7]. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use vacuum as taught by Forsyth to mechanically bias planar light wave circuit of Levy with test fixture during testing.

Regarding claims 3 and 5, Levy discloses all the elements except for soldering wires from the printed circuit board to the planar light wave circuit. Forsyth discloses soldering wires (wire bonding for claim 5) [55 or 52] from the printed circuit board [40] to the planar light wave circuit [30]. It would have been obvious to person having ordinary skill in the art at the time the invention was made to use soldering wires (which is known in the art) as taught by Forsyth, in order to obtain electrical connection between printed circuit board and planar light wave during testing.

Regarding claims 4 and 6, Forsyth in fig. 7 and 9 discloses attaching an electrical connector [92, 93] to the printed circuit board, the electrical connector coupled to the tester via a ribbon cable [112 and 111 and lines 43-62 of column 7].

Regarding claim 7, Levy discloses all the elements except for using a conductive epoxy and wires to electrically couple the printed circuit board to the planar light wave circuit. However, Forsyth discloses gold wires [52, 55]. It would have been an obvious matter of design choice to use a conductive epoxy and wires to electrically couple the printed circuit board to the planar light wave circuit, since applicant has not disclosed that use of conductive epoxy and wires as claimed solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with Forsyth's gold wires to electrically couple the printed circuit board to the planar light wave circuit during testing.

### ***Response to Arguments***

Applicant's arguments filed 04/21/2005 have been fully considered but they are not persuasive. With respect Lavy reference, Applicants' argues that Lavy does not teach or suggest either; (a) optically coupling the planar lightwave circuit to the tester; or (b) optically testing the planar lightwave circuit. Examiner disagrees because at lines 39-41 of column 1, Lavy discloses testing of an electrical integrity of the planar lightwave circuit. Lavy also uses tester (control circuit 26) to control the beam of planar lightwave circuit using electrical connection 28 and 30. Therefore, the planar lightwave circuit is optically and electrically connected to the tester as claimed for testing (i.e. to

control a beam). Also, the planar lightwave circuit is on test fixture 22 during testing, therefore argument regarding interconnect unit 10 is not true.

With respect to Forsyth reference, Applicants' argue that Forsyth does not teach or reasonably suggest that the device under test is a planar lightwave circuit. Examiner disagrees because device under test is disclosed by Lavy. Forsyth is cited for use of vacuum to hold planar lightwave circuit 30. Therefore, Lavy and Forsyth can be combined under 35 USC §103.

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
2. Prior art to Allie et al. (US 5400417) discloses PCB 14 with PLC and tester.
3. Prior art to Sjölander et al. (US 5715338) in fig. 1 discloses opto-electric component 11 with electrical and optical connection.
4. Prior art to Kuba (US 6840685) discloses an opto-electrical module with electrical and optical connection.
5. Prior art to Boyd (US 4875004) discloses test system for electrical and optical testing of an array of photodiodes in a vacuum chamber.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 571-272-1968. The examiner can normally be reached on 8:00 to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



June 11, 2005

Paresh Patel  
Primary Examiner  
Art Unit 2829